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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,498	01/05/2001	Michael Yip	2717P030	5235

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EXAMINER

WON, YOUNG N

ART UNIT	PAPER NUMBER
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2155

18

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SMA

**Office Action Summary**

Application No.

09/755,498

Applicant(s)

YIP, MICHAEL

Examiner

Young N Won

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Amended claims 1-24 have been examined.

***Claim Objections***

2. Claim 20 is objected to because of the following informalities: The preamble begins with "A comprising". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 10-13, 15-21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gleeson et al. (US 5959989A).

**Independent:**

As per claims 1, 12, and 18, Gleeson teaches a system (see title), a method, and an article of manufacture (see col.9, lines 51-53) comprising: a machine accessible

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medium including content (see col.9, lines 51-53); a first VLAN and a second VLAN (see Fig.2A and col.5, lines 53-55); and the first and second VLANs to receive from the first VLAN a data packet having a first VLAN ID associated with the first VLAN, to replace the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the second VLAN ID is different from the first VLAN ID, and to forward the modified data packet from the first VLAN (see col.5, lines 59-67; col.6, lines 1-3, 9-26, & 32-45).

Gleeson does not explicitly teach wherein the second VLAN comprises a first VLAN. However, Gleeson does teach wherein the LAN comprises a LAN, which comprises a VLAN (see Fig.2A: LAN of device 221 comprises VLAN 208, 221, and LAN of device 220, which comprises VLAN 204 and 206). The translation or conversion of one ID to another ID by means of a table would be performed the same regardless of what network comprised of another network, thus this descriptive material will not distinguish the claimed invention from patentability (see next paragraph for case law examples). The invention does not claim an improvement of VLAN networking capability or any limiting factors to evidence that if another network type (MAN, WAN, LAN) was used, the invention would not function the same. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made implement any network architecture so long as there is switch or agent or manager that maintains a table for the identification of VLAN's within the group and all data must be transmitted to via the switch, agent, or manager, because VLAN comprising another VLAN does not functionally relate to the steps in the system, method, and article of

manufacture claimed and because the subjective interpretation of the VLAN comprising another VLAN does not patentably distinguish the claimed invention.

Gleeson does not explicitly teach of a metropolitan area network (MAN); that a switch is coupled to the MAN; and that modified data packet is forwarded to the MAN, however these differences are found in nonfunctional descriptive material and are not functionally involved in the steps recited. The comprising of VLAN within VLAN, replacing of VLAN ID's, and forwarding of modified data packets from the first VLAN would be performed the same regardless of the MAN, thus this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to couple the switch to any network and to forward the modified data packets to any network, because a MAN does not functionally relate to the steps in the system, method, and article of manufacture claimed and because the subjective interpretation of the MAN does not patentably distinguish the claimed invention.

As per claim 20, Gleeson teaches of a switch (see Fig.2A, #220-223; col.6, lines 15-17; and col.7, lines 53-56) comprising: a port for receiving a data packet from a first VLAN (see col.7, lines 53-56); an assigner to assign a first VLAN ID to the data packet that identifies the first VLAN (see col.9, lines 16-27); a verifier to verify that the assigned first VLAN ID matches a value stored in a memory of the switch (see col.9, lines 57-64); a controller to control the processing of the verified data packet and to replace the

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verified first VLAN ID with a second VLAN ID that identifies a second VLAN (see col.9, lines 47-53); and a forwarder to forward the modified data packet (see col.6, lines 38-41 and col.9, lines 57-col.10, line 12). Gleeson does not explicitly teach of a MAN or that the forwarder forwards the packet to a MAN, however these differences are found in nonfunctional descriptive material and are not functionally involved in the steps recited (see claim 1 rejection).

Dependent:

As per claims 2, 16, and 23, Gleeson further teaches wherein the second VLAN further comprises a third VLAN (see col.5, lines 53-55 and claim 1 rejection), and wherein the preventer of the switch further prevents the modified data packet from the first VLAN from being forwarded to the third VLAN (see col.13, lines 6-14).

As per claims 3, 4, and 17, Gleeson teaches of further comprising a switch (see col.8, line 19: "intermediate device") for maintaining a forwarding data base (FDB) for the first, second, and third VLANs, wherein each FDB contains one or more media access control (MAC) address entries (see col.8, lines 19-29), and adding a new MAC address entry to the FDB for each of the first, second, and third VLANs when a new MAC address is learned from the first, second, or third VLAN (see col.6, lines 18-26; and col.16, lines 30-35).

As per claims 5, 13, and 19, Gleeson further teaches wherein the switch further to receive from the MAN a second data packet having the second VLAN ID, to replace the second VLAN ID with the first VLAN ID, and to forward the modified second data packet from the MAN to the first VLAN (see col.6, lines 32-45).

As per claims 10, 11, and 15, Gleeson further teaches wherein the first and second VLAN ID is obtained from an internal value stored in the switch (see col.6, lines 41-45).

As per claim 21, Gleeson further teaches wherein the assigner further identifies the second VLAN based on the contents of the data packet's source Internet Protocol (IP) address (see col.7, lines 5-6).

As per claim 24, Gleeson teaches of further comprising: a second port (see Fig.2A and col.8, lines 6-11) for receiving a second data packet from the second VLAN, and wherein the assigner to assign the second VLAN ID to the second data packet that identifies the second VLAN (see col.9, lines 16-27), the verifier to verify that the assigned second VLAN ID matches a second value in the memory of the switch, the controlling to replace the verified second VLAN ID with the first VLAN ID that identifies the first VLAN (see col.9, lines 57-64), and the forwarder to forward the modified second data packet to the first VLAN (see col.6, lines 38-41).

4. Claims 6-9, 14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gleeson et al. (US 5959989A) in view of Crinion et al. (US 6181699B1).

As per claims 6, 8, 14, and 22 Gleeson does not explicitly teach wherein the first and second VLAN ID is obtained from a header encapsulating the data packet by an assigner. Crinion teach wherein the first and second VLAN ID is obtained from a

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header encapsulating the data packet (see Fig.4; col.4, lines 1-4; and col.5, lines 35-37) by an assigner (see Fig.1, #140). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Crinion within the system of Gleeson by implementing obtaining ID's from header encapsulating the data packet within the network multicast system because Gleeson teaches of tables (see col.8, lines 20-29) and header (see Fig.4A) and for tables to be functionally effective, the data must contain something for the device to compare on the table with the received data. Therefore, since encapsulated headers are well known and widely used in the art, it would be obvious to implement such a mechanism to obtain VLAN ID's.

As per claims 7 and 9, Gleeson does not explicitly teach wherein the header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1 Q frame tag. Crinion teaches of header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1 Q frame tag (see col.1, lines 15-18; col.2, lines 63-65; and col.4, lines 1-3). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Crinion within the system of Gleeson by implementing header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1 Q frame tag within the network multicast system because by employing a standard in the industry makes the network infrastructure protocol insensitive and thus cost effective by eliminating the need for additional hardware or software.



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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Young N Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 8AM-6PM.

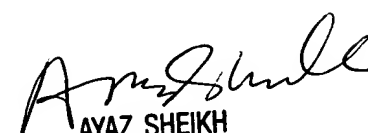
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Young N Won



February 25, 2003



AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
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